

A more detailed study of the interaction between biotin, avidin and lysozyme was undertaken by Meyer.¹ Seven avidin preparations were tested by him against *M. lysodeikticus*. These showed bactericidal titers varying from 4 to 160 lysozyme units per mg. The addition of 10 micrograms of biotin increased these lytic titers about 4-fold. An even greater increase in bactericidal power was noted on the addition of biotin (1 to 10 micrograms per mg.) to lysozyme. The lytic titer in many cases was increased as much as 250-fold. In the most extreme case an initial titer of 20,500 lysozyme units per mg. was increased to 10,500,000 units (500-fold) by the addition of 10 micrograms of biotin.

No theory is as yet suggested to account for biotin activation of this mucolytic enzyme. It is evident, however, that Laurence and Meyer have opened up an entirely new field of nutritional and immunologic research, which promises results of basic clinical interest.

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MALARIA

Malaria has always ranked high in the list of pestilences that are a blight to health, efficiency and morale. This disease may in a short period of years injure, and even wreck, a civilization fostered for years. Particularly does malaria effect the efficiency of labor, and the cost through it, to industry, when prevalent, must be enormous. The pernicious "contract" work incidental to tropical areas is a result of industry protecting itself against the loss of time and money, despite the admitted fact that the tolerance for malaria in native populations may be considerable. For instance, the average parasitic rate in blood-film surveys on workers on banana plantations may be as great as 25 to 30 per cent. The importance heretofore attached to enlarged spleen index rates, in adults in the tropics and the Orient, has been markedly discounted by many workers.

Concerning the anopheles mosquito, when of a type that is a potent vector if control of its breeding areas can be obtained, it may be said that malaria would cease to be a disease of importance. It must be recalled, however, that only

a few anopheles mosquitoes, after emerging from the larval state, will play an important rôle. This rôle, too, is quite often dependent on the people, their environment and the clinical recognition of the disease with its proper treatment.

This brings to the forefront the distinguishing of a new infection from ordinary relapses—generally a doubtful possibility, except in infants. It is this point that makes the returning soldier and sailor from known infected regions of such importance to the health official of areas proved to have anopheles breeding that are potent vectors. It is an epidemiologic fact that many persons, previously exposed, carry the parasites for years. The elimination of relapses, or the destruction of the parasites in the blood by chemo-therapeutic methods, are still difficult problems. So long as military personnel will be returned uncured, or in a resting or subclinical state, or when true relapses occur, especially in treated persons, or the negative clinically, but microscopically-proved positive parasitic carrier state exists, there must be adopted, in many communities in this country, mosquito control measures. These generally consist of drainage of unnecessary water storage; the treatment of all permanent water courses with oil, paris green dust mixtures, or the new insecticide, DDT, called dichlorodiphenyl-trichloroethane, and the use of top-feeding fish; the destruction of mosquitoes in human habitations, and the prevention of access to humans by proper screening; the elimination of migration of mosquitoes by various types of transportation; the proportional degree to which the different species of anopheles are in nature vectors of malaria, and finally blood indices of population groups and their subsequent treatment of those persons found infected.

Let no health official forget that financial and official coöperation are necessary for control, and that there is yet much to be learned to assure eradication of malaria. Moreover, malaria control will continue to play a major rôle in the war efforts of this and other nations.

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Doctors of Medicine as Others See Them: Health

The Murray-Wagner-Dingell bill with its plans for compulsory sickness insurance would jump the social security tax for both employee and employer from the present one per cent to six per cent. Any kind of insurance works on the principle that more persons pay who don't receive than vice versa. Otherwise all insurance companies would go broke. Compulsory health insurance would mean the well help pay the bills of the sick, which is all right except most persons are able to pay their own doctor and hospital bills. The government has not been able to cure economic ills and we doubt if it can cure physical ills. If adequate provision is not now in effect for health care of those unable to afford it themselves such provision should be made. But it doesn't require a compulsory insurance plan levied on everybody for the benefit of the few.—*Kingsbury Recorder*.